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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte BRET A. FERREE

Appeal 2009-006515
Application 10/652,842
Technology Center 3700

Decided: May 24, 2010

Before: JENNIFER D. BAHR, STEFAN STAICOVICI, and FRED A.
SILVERBERG, *Administrative Patent Judges.*

BAHR, *Administrative Patent Judge.*

DECISION ON APPEAL

STATEMENT OF THE CASE

Bret A. Ferree (Appellant) appeals under 35 U.S.C. § 134 (2002) from the Examiner's decision rejecting claims 20-25, 29, and 31. Claims 17, 18, and 26 have been canceled. Claims 1-16, 19, 27, 28, 30, 32, and 33 have been withdrawn from consideration. We have jurisdiction over this appeal under 35 U.S.C. § 6 (2002).

The Invention

Appellant's claimed invention is directed to cemented artificial disc replacements. Spec. 2:2-4.

Claim 20, reproduced below, is illustrative of the claimed invention.

20. A system including an artificial disc replacement (ADR) configured for placement within a vertebral disc space between opposing vertebral endplates, the ADR comprising:

a component forming a cavity between the component and one of the vertebral endplates; and

a path to fill the cavity with cement after the component is installed.

The Rejections

Appellant seeks review of the Examiner's rejections of claims 20-25 and 31 under 35 U.S.C. § 102(b) as anticipated by U.S. 4,759,766 issued to Buettner-Janz (Jul. 26, 1988)¹; and of claims 20-25, 29, and 31 under §

¹ The Examiner states the rejection as "anticipated by or, in the alternative ... as obvious over Buettner-Janz." Ans. 3. However, the rejection that follows does not have an obviousness analysis. The Examiner then provides an obviousness analysis with Buettner-Janz in view of Masini. Ans. 4-5. Thus, we understand the "alternative" obviousness rejection to be the

103(a) as unpatentable over Buettner-Janz and U.S. 6,273,891 B1 issued to Masini (Aug. 14, 2001).

SUMMARY OF DECISION

We AFFIRM.

ISSUES

Claim 20 requires an artificial disc replacement having a component forming a cavity and a path to fill the cavity with cement after the component is installed. The Examiner found that Buettner-Janz describes an artificial disc having a cavity and teeth that define a channel capable of being used to fill the cavity with cement. Ans. 3. Thus, the Examiner rejected claim 20 as being anticipated by, or in the alternative, obvious in view of Buettner-Janz. *Id.* Appellant argues that cement could not be filled between the spikes (teeth) because the teeth in Buettner-Janz would be fully embedded into the bone in a complete installation; a partial installation would be counter to the intended use set forth by Buettner-Janz. Appeal Br. 3. Appellant argues this rejection of claims 20-25 and 31 as a group. Appeal Br. 2. We select claim 20 as representative of this group, with claims 21-25 and 31 standing or falling with claim 20. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Thus, the first issue presented in this appeal is whether the end plate of Buettner-Janz, with its cavity below the plane guide rim 2 and the teeth 3, describes a system including an artificial disc replacement component

obviousness rejection of claims 20-25, 29, and 31 as unpatentable over Buettner-Janz and Masini. *See* Ans. 4-5.

having a path for filling the cavity with cement after the component is installed.

The Examiner alternatively rejected claim 20, and claims 21-25, 29, and 31 as obvious over the combined teachings of Buettner-Janz and Masini. Ans. 4. In this rejection, the Examiner additionally found that Masini teaches an injection system including an instrument for pressurizing the cement to fill and seal the space (cavity) between a prosthetic and a bone. Ans. 4, 6. The Examiner concluded that it would have been obvious to modify the prosthetic of Buettner-Janz to include an injection system as taught in Masini in order to fill and seal the space between the bone and prosthetic with cement. Ans. 4. Appellant argues that there is no teaching or suggestion in Masini to utilize the cement pressurization system in Buettner-Janz. Appeal Br. 4. Appellant argues claims 20-25, 29, and 31 together as a group. We select claim 20 as representative of this group, with claims 21-25, 29, and 31 standing or falling with claim 20. 37 C.F.R. § 41.37(c)(1)(vii) (2007).

Thus, the second issue presented in this appeal is whether the Examiner has articulated a reason with rational underpinning supporting the proposed combination of Buettner-Janz's prosthetic disc and Masini's cement injecting system.

ANALYSIS

Buettner-Janz

Appellant's argument is essentially that the device of Buettner-Janz would have to be installed incorrectly or incompletely in order for cement to be filled in between the teeth. Appeal Br. 2-3; Reply Br. 1. Thus, according

to Appellant, Buettner-Janz fails to meet the "after the component is installed" limitation because the anchors (teeth) must be "fully imbedded" for one of ordinary skill in the art to consider the component "installed." Reply Br. 1. However, claim 20 merely requires that the system have a path with a function of allowing the cavity to be filled with cement "after the component is installed." Notably, claim 20 does not require that the component have any particular shape or be installed in any particular way.

We find that Buettner-Janz describes an artificial disc replacement component (end plate) formed in such a shape as to have a cavity, below the plane guide rim 2, which can be filled with bone cement, and a number of teeth 3, which give the end plate anchorage in the vertebrae. Col. 4, l. 66 to col. 5, l. 2, col. 5, ll. 27-30, figs. 5-7. The Examiner's proposed reading of the claimed subject matter on Buettner-Janz is that the teeth of the component can be implanted into the vertebrae while leaving a path between the teeth for cement to be introduced into the cavity. Ans. 3, 5-6. Thus, when used as proposed by the Examiner, the component in Buettner-Janz is fully "installed" when the teeth are in the bone, but not in so far as to close off the cement path. The teaching in Buettner-Janz that anchorage can be effected by edge teeth or with bone cement (col. 5, ll. 1-2) belies Appellant's argument that cement could not be filled between the spikes (teeth) because the teeth in Buettner-Janz would be fully embedded into the bone in a complete installation or that a partial installation would be counter to the intended use set forth by Buettner-Janz. While the introduction of cement into the path may be required to fully install the artificial disc as a whole, claim 20 is not so limited as to preclude the Examiner's particular reading of

the artificial disc replacement of claim 20 on the artificial disc replacement of Buettner-Janz.

Buettner-Janz in view of Masini

Appellant first argues that the Examiner's rejection of claims 20-25, 29, and 31 as unpatentable over Buettner-Janz and Masini is actually only a rejection of claim 29. Appeal Br. 3. However, the Examiner lists claims 20-25, 29, and 31 in the statement of the rejection, and provides findings and analysis pertinent to the limitations of claims 20-25, 29, and 31. Ans. 4-5.

The Examiner's rejection is a proposed combination of Buettner-Janz and Masini. Ans. 4-5. In particular, the Examiner finds that Masini discloses a "system (fig. 3) including an instrument (43) for pressurizing the cement" (Ans. 4), the system being "the teaching of Masini to use an injector (43) and a path (45)" (Ans. 6). These findings are relevant to how the injector is used - a path - which is a limitation of claim 20. The Examiner makes explicit findings regarding claims 21-25 and 31. Ans. 5. Clearly, the Examiner discusses the injector of Masini to address claim 29. Ans. 4. Therefore, the Examiner has made the pertinent findings and analysis, albeit tersely, regarding all of claims 20-25, 29, and 31, as unpatentable over Buettner-Janz and Masini.

Appellant argues that the prior art does not teach or suggest the use of cement pressurization in Buettner-Janz. Appeal Br. 4. This argument is not persuasive. *See KSR Int'l Co. v. Teleflex Inc.*, 550 U.S. 398, 415 (2007) ("[w]e begin by rejecting the rigid [TSM] approach of the Court of Appeals."). The Examiner concluded that it would have been obvious to modify the prosthetic (artificial disc) of Buettner-Janz to include an injection

system and instrument as taught in Masini. Ans. 4. More specifically, the Examiner proposes to modify the system of Buettner-Janz to use an injector 43 and path 45, as taught by Masini, as a substitute for filling the cavity with cement prior to implantation. Ans. 6. The reason for this modification, according to the Examiner, is "to fill and seal [the] space between prosthetic and bone with the cement." *Id.* The Examiner noted that the modification "amounts to mere substitution of one functionally equivalent cement delivery system for another." *Id.*

We find that Buettner-Janz teaches to fix the artificial disc implant to bone using cement (col. 5, ll. 1-2, 27-30) but does not describe how to fill the cavity or anchor the disc component with the cement. We find that Masini teaches an implant that is affixed to a bone using cement. Col. 5, ll. 28-42. In particular, we find that the cement is introduced between the implant and the bone by way of port 34 or stem 45, which serves as a path to distribute the cement, and that a particular injector device 43 may be used to inject the cement (col. 5, ll. 28-42, 44-55, figs. 3, 4).

The Examiner classifies the proposed combination "to modify the prosthetic of Buettner-Janz . . . to include an[] injection system as taught by Masini" as a "substitution" to "fill and seal [the cavity]." Ans. 4. While the Examiner's rejection may not be a model of clarity, a reading of Masini suggests an "injector system," as alluded to by the Examiner, is the injector device 43 and the pathway 45 that serves to inject and direct cement into the cavity between the prosthetic and the bone. The Examiner's discussion of Masini's teaching to use an injector 43 and a path 45 as a substitute for filling the cavity with cement (Ans. 6) further clarifies that this is what was meant by the Examiner. Buettner-Janz is silent as to how to add the cement

but Masini explicitly describes a method and structure for adding cement. Thus, the Examiner's proposed combination ("substitution") appears to be nothing more than taking a known prosthetic disc component that has a cavity requiring bone cement (Buettner-Janz) and utilizing a known method for injecting bone cement into prosthetic cavities (Masini). *See KSR*, 550 U.S. at 417 ("if a technique has been used to improve one device, and a person of ordinary skill in the art would recognize that it would improve similar devices in the same way, using the technique is obvious unless its actual application is beyond his or her skill.").

CONCLUSIONS

The end plate of Buettner-Janz, with its cavity below the plane guide rim 2 and the teeth 3, is an artificial disc replacement component having a cavity and a path for filling the cavity with cement after the component is installed. Thus, the Examiner did not err in finding that Buettner-Janz describes each limitation of claim 20. Likewise, we are not persuaded of error in the Examiner's rejection of claims 21-25 and 31.

The Examiner, in rejecting claims 20-25, 29, and 31, has articulated a reason with rational underpinning for combining the disc of Buettner-Janz and the cement injection system of Masini. Thus, we are not persuaded of error in the Examiner's rejection of claims 20-25, 29, and 31.

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DECISION

We affirm the Examiner's decision as to claims 20-25, 29, and 31.

No time period for taking any subsequent action in connection with this appeal may be extended under 37 C.F.R. § 1.136(a)(1)(iv) (2007).

AFFRIMED

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